

SECTION IV.—RIVERS AND FLOODS.

RIVERS AND FLOODS, OCTOBER, 1914.

By ALFRED J. HENRY, Professor of Meteorology, in charge of River and Flood Division.

[Dated Washington, D. C., Dec. 1, 1914.]

The precipitation of the month was not sufficiently heavy or prolonged in any one region to produce severe floods in the streams. There were, however, a few cases of heavy and continued rains that resulted in destructive floods. Perhaps the most severe of these purely local floods was the one that occurred on the 23d in Alazan and San Pedro Creeks, tributaries of the San Antonio River, which join that river in the town of the same name in Texas. The overflow swept the valley clear of out-houses and the frail dwellings occupied by the poorer classes. Nine persons were drowned and the property loss is estimated at \$45,000.

A very sudden rise, estimated at 30 feet, occurred in the Rio Grande, at Del Rio, Tex., on the 21st; the crest of this flood passed Eagle Pass, Tex., on the 22d; Laredo on the 24th; Rio Grande, Tex., on the 25th; and Mission on the 27th. The damage from this flood was confined mostly to crops and property that could not be removed from the river. The total loss is estimated at \$16,000.

The precipitation which caused the above-described flood was not recorded at Weather Bureau stations in the Rio Grande Valley, although there was a general fall of rain in the State on the 23d, 24th, and 25th, west of the ninety-fifth meridian.

These rains caused a rise of approximately 20 feet in the Guadalupe River from the 23d to the 25th. In the

lower part of Victoria County, Tex., the river overflowed its banks and caused considerable damage to roads, bridges, farm lands, and crops; the total loss being estimated at \$11,000.—*B. Bunnemeyer, Section Director.*

Rains fell nearly continuously over the South Atlantic States on the 14th, 15th, and 16th, resulting in high stages in the streams of Georgia, North Carolina, and South Carolina, but severe floods did not occur.

LAKE LEVELS DURING OCTOBER, 1914.

By UNITED STATES LAKE SURVEY.

[Dated Detroit, Mich., Nov. 3, 1914.]

The stages of the Great Lakes for the month of October, 1914, were as follows:

Data.	Lakes.			
	Superior.	Michigan-Huron.	Erie.	Ontario.
Mean level during October, 1914:				
Above mean sea level at New York.....	Feet. 602.75	Feet. 580.28	Feet. 572.10	Feet. 245.59
Above or below—				
Mean stage of September, 1914.....	—0.05	—0.20	—0.27	—0.50
Mean stage of October, 1913.....	—0.27	—0.44	—0.33	—0.70
Average stage for October, last 10 years.....	+0.08	—0.38	—0.08	—0.41
Highest recorded October stage.....	—0.81	—2.66	—1.60	—2.22
Lowest recorded October stage.....	+1.17	+0.68	+1.30	+1.42
Probable change during November, 1914.....	—0.2	—0.3	—0.3	—0.30